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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,320	07/28/2003	Derick Arippol	ARIP.P0001	6583

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EXAMINER

EDWARDS, ANTHONY Q

ART UNIT	PAPER NUMBER
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2835

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,320

Applicant(s)

ARIPPOL, DERICK

Examiner

Anthony Q. Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 14 and 16-24 is/are pending in the application.
- 4a) Of the above claim(s) 20-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 14, 16, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Newly submitted claims 20-24 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: there are no drawings relating to “each module comprising four corners and middle regions between each pair of adjacent corners, the module being connected with the first railing at a first corner and with the second railing at a second corner, the first and second corners being a pair of adjacent corners, wherein the module is not connected with the first or second railings at the third or fourth corners or at the middle region between the first and second corners.” Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 20-24 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8 and 10, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,150,279 to Collins et al. (“Collins” hereinafter) in view of U.S. Patent No. 6,007,358 to Nagase. Referring to claim 1, Collins discloses an assembly (see Figs. 3 and 12) for housing a computer system, wherein the assembly comprises a housing (20)

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comprising a plurality of railings (22), a plurality of computer circuit boards (33), see col. 6, lines 7-12, attached to the railings (22), wherein the circuit boards (33) are integrated to form the computer system (see Fig. 12 and the corresponding specification), and a power supply (46) for supplying power to the circuit boards (see Figs. 15 and 20 as well as col. 8, lines 21-24). Collins does not specifically teach the power supply coupled to the railings.

Nagase teaches providing electrical power supply to the railings of a computer system into a case (25) along guide rails (26) in order to supply power to a logic package (27). It would have been obvious to one having ordinary skill in the art at the time of the invention to supply power to the railings of Collins, as taught by Nagase, since the device of Nagase would provide power busses from the internal core area to the rails of Collins, thereby eliminating the need to attach power modules to the outer surface of the circuit boards (33) of Collins (see Figs. 16 and 17) and thus providing a smaller footprint for the assembly of Collins.

Referring to claim 2, Collins in view of Nagase disclose an assembly, wherein the housing is open to the environment (see Fig. 3 of Collins).

Referring to claim 3, Collins in view of Nagase disclose an assembly includes two or more layers, each layer comprising a plurality of railing (22) and a plurality of computer circuit boards (33) attached to the railing. See Figs. 3 and 12 of Collins.

Referring to claim 4, Collins in view of Nagase disclose an assembly, wherein the housing does not require a compact motherboard-CPU configuration (i.e., the horizontal stacking of modules (23) in Collins does not limit the assembly to any minimum height requirement).

Referring to claim 5, Collins in view of Nagase disclose an assembly constructed of two or more separate segments that can be joined together to act as one unit, wherein each separate segment is self-sufficient. See Fig. 4 and the corresponding specification of Collins.

Referring to claim 6, Collins in view of Nagase disclose an assembly having a cylindrical shape. See Figs. 3 and 12 of Collins.

Referring to claim 8, Collins in view of Nagase disclose an assembly wherein the computer circuit boards (33) are attached by hanging the computer circuit boards from the railings (22). See Fig. 9 and 12 of Collins.

Referring to claim 10, Collins in view of Nagase disclose an assembly further comprising a connection kit. See Figs 9-11 of Collins, wherein various connectors are provided on the circuit board (33).

Referring to claim 14, Collins in view of Nagase disclose an assembly wherein the computer modules (30) are hung using a frame (not numbered) that is structurally connected to the modules (see Fig. 13).

Referring to claim 16, Collins in view of Nagase disclose an assembly wherein the computer circuit boards (33) do not include a case. See Fig. 13 of Collins, wherein the cooling modules case (30) is not provided.

Claims 9, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collins in view of Nagase. Referring to claim 9, Collins as modified discloses the assembly as substantially claimed (see Fig. 20, which shows DC-DC power supplies within the assembly), except for the power supply having a first stage and a second stage, the first stage converting a first voltage that is converted into a second voltage, wherein the second voltage is provided to

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the second stage, and wherein the second stage creates a third voltage that is suitable for the circuit board from the second voltage.

It is notoriously old and well known in the art computer systems to provide “step-down” power conversion from one stage to a second stage and a third stage, so that voltage is converted from a first to a second to a third voltage, respectively. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize “step-down” power conversion for the power supply of the computer assembly of Collins as modified to insure proper, i.e., lower, voltage is used on the circuit board(s) in the system, as opposed to the rails, etc.

Referring to claim 18, Collins in view of Nagase discloses the assembly as substantially claimed, except for the first stage being the only part of the power supply that provides power to the rails. It is also notoriously old and well known in the art computer systems to utilize “step-down” power conversion in a manner wherein the highest voltage output is restricted to the main part of the system, e.g., the rails.

Referring to claim 19, Collins as modified, discloses the assembly as claimed, wherein stages of the “step-down” is activated by a signal coming from a motherboard. See Fig. 11a-11b and the corresponding specification, wherein a logic board provides signal distribution as needed to the system.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collins in view of Nagase, and further in view of U.S. Patent No. 4,600,231 to Sickles. Collins as modified discloses the assembly as claimed, except for the housing further comprising a plurality of columns and the columns are coupled to the railings. Sickles teaches providing a carrier for

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self-supporting printed circuits boards (see Figs. 2 and 7), wherein the carrier includes columns (54) coupled to railings (28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to further provide the railing assembly of Collins to include columns attached to the railings, as taught by Sickles, since the device of Sickles would provide more stability for the assembly of Collins.

Allowable Subject Matter

Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: the specific limitation of each segment comprising a cooling system, wherein the cooling system is a single fan, is not taught by the prior art references.

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. As discussed in the above rejection, Collins teaches providing computer circuit boards (33) attached to rails (i.e., platters 22). Although Collins does seem to indicate a supposed advantage to providing a power supply applied individually to processor modules (i.e., circuit boards 33) via power tabs (34) for providing power to each processor module, as mentioned above, the disadvantage is a larger footprint or amount of space required for the assembly. The combination of Collins in view of Nagase solves this problem.

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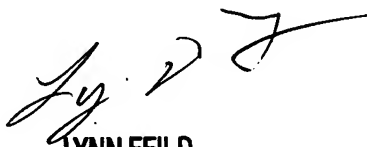
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Q. Edwards whose telephone number is 571-272-2042. The examiner can normally be reached on M-F (7:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2800, ext. 35. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 13, 2006
aqe


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